

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 1-4 and 10 have been amended. Support for the amendments is provided, for example, in paragraphs [0078]-[0083] of Applicant's published specification. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Claims 1, 2, and 10 were rejected, under 35 USC §103(a), as being unpatentable over Li et al. (US 6,904,283) in view of Wesel et al. (US 6,125,150) and Kwon et al. (US 6,151,328). Claim 3 was rejected, under 35 USC §103(a), as being unpatentable over Li in view of Wesel, Kwon, and Brink et al. (US 6,038,450). Claim 4 was rejected, under 35 USC §103(a), as being unpatentable over Li in view of Wesel, Kwon, and Todd (US 5,357,284). To the extent that these rejections may be deemed applicable to the amended claims presented herein, the Applicant respectfully traverses as follows.

Claim 1 now defines:

A multicarrier communication apparatus comprising:
a superimposing section that superimposes transmission symbols with a plurality of subcarrier groups, each of the plurality of subcarrier groups including a plurality of subcarriers;
a control section that controls a first combined transmission power of each of the plurality of subcarrier groups on which the transmission symbols are superimposed; and
a transmission section that transmits a multicarrier signal obtained by controlling the first combined transmission power of each of the plurality of subcarrier groups,
wherein:
the control section increases or decreases, by a power control amount, a transmission power of each subcarrier of the plurality of subcarrier groups such that each of the plurality of subcarrier groups has the same second combined transmission power, the power control amount being a value obtained by dividing a difference between

a combined received power for each of the plurality of subcarrier groups at a remote communication station and a desired target received power by a number of subcarriers included in each of the plurality of subcarrier groups.

Thus, claim 1 defines a multicarrier communication apparatus that increases or decreases the transmission power of every subcarrier within a plurality of subcarrier groups such that each subcarrier group has the same transmission power. The amount of increase or decrease is obtained by dividing a difference between the combined receive power for each of the subcarrier groups at a remote communication station and a desired target receive power by the number of subcarriers within each subcarrier group. The claimed subject matter provides the advantages of reducing the range of fluctuation of required transmission power and reducing the amount of feedback required for converging the actual and desired reception power for a group of subcarriers (see paragraph [0086] of Applicant's published specification).

Although the Final Rejection proposes that Li discloses calculating a power difference between a subcarrier group and a target receive power (see Final Rejection page 5, lines 11-14), Li does not disclose Applicant's claimed subject matter of dividing a difference between the combined receive power for each of a plurality of subcarrier groups at a remote communication station and a desired target receive power by the number of subcarriers within each subcarrier group. Wesel and Kwon do not supplement the teachings of Li in this regard.

Although Wesel is cited in the Final Rejection for disclosing that transmission power is evenly distributed across all subcarriers of an OFDM signal (see Final Rejection page 6, lines 1-2), Wesel does not disclose Applicant's claimed subject matter wherein each of a plurality of

subcarrier groups has the same transmission power applied thereto. Li and Kwon do not supplement the teachings of Wesel in this regard.

Accordingly, the Applicant submits that the teachings of Li, Wesel, and Kwon, even if combined as proposed in the Final Rejection, still would lack the above-noted features of claim 1 and thus these references, considered individually or in combination, do not render obvious the subject matter now defined by claim 1. Independent claim 10 now similarly recites the above-mentioned subject matter distinguishing apparatus claim 1 from the applied references, but does so with respect to a method. Therefore, allowance of claims 1 and 10 and all claims dependent therefrom is warranted.

With regard to claim 4, Applicant notes that the Final Rejection proposes that Todd discloses, in Fig. 8, superimposing transmission symbols with a subcarrier group, using combining logic 822, after substituting an in-phase or an orthogonal component (see Final Rejection page 9, second paragraph). However, Todd discloses that Fig. 8 illustrates a digital demodulation scheme used in a receiver (see Todd col. 6, lines 65-66), whereas the claimed subject matter relates to a modulation scheme used in a transmitter. The Final Rejection fails to indicate how the bit stream output by Todd's combining logic 822 produces transmission symbols that are superimposed on a subcarrier group. Li, Wesel, and Kwon are not cited in the Final Rejection for supplementing the teachings of Todd in this regard. Therefore, allowance of claim 4 is warranted for this independent reason.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James Edward Ledbetter/

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JEL/DWW/att

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